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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,576	03/25/2004	Eric Lebrun	FR920030024US1	7121

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IBM CORPORATION
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EXAMINER	
JONES, PRENELL P	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/809,576	LEBRUN ET AL.	
	Examiner	Art Unit	
	Prenell P. Jones	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munshi (US Pat 7,010,590) in view of Zhang et al (US Pat 7,088,706).

Regarding claim 1 and 5, Munshi (US Pat 7,010,590) discloses securing transmission over a network and measuring latency, wherein the architecture includes determining the transmission path for routing data packets/probe/data-grams/pings, wherein the ping/probe datagram determines whether a physical connection exists with respect to a specific IP address, and routing between sending and receiving node (routers), whereby probe packets/probe data-grams/ping are transmitted to adjacent nodes specifying capacity of a plurality of transmission

paths, and transmitting pings to destination node via transmission paths based on responses, periodically transmitting ping packets/transmitting a plurality probe data-grams (col. 4, line 60 thru col. 4, line 23, col. 6, line 42), wherein master nodes/transaction servers (network manager, col. 14, line 30-35, source device receiving from manager a message for retrieving information related to the path of data-grams) communicates (source) with destination node/client via message packets/ping/probe datagram, that include checksum, unique message ID, source and destination address (col. 6, line 61 thru col. 7, line 14, col. 8, line 14-30, col. 13, line 1-41). However, Munshi silent on a plurality of IP network devices.

In an IP computation and monitoring environment, Zang discloses measuring latency in an IP communication environment wherein Zang discloses that it is well known in the art for multiple IP switch routers (col. 10, line 38-43) to communicate via queries/messages/request, wherein communication exist between a source and destination, which are IP devices (col. 5, line 15-24, destination address being an IP address of destination device, and source IP being an IP address for source device) whereby the message/query/request/response includes source IP address/DA address and IP address/SA address, and network managers/routers are interested in determining the latency of their networks, which may include a plurality of time stamp message, wherein Zang indicates that messages sent between source and destination may follow different path (col. 2, line 5-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement utilizing communication among a plurality of IP network device as associated in an Internet environment as taught by Zang with the teachings of Munshi for the purpose of further increasing security as well as minimizing cost.

Regarding claim 2, and 8, although Munshi is silent on inserting a value in each probe datagram to initiate a IP device to reply to manager station/routers, Zang further discloses loading values used in destination port field and protocol field originating from the path state setup message, responder disables port after replies to probe packet/ping/query (col. 7, line 49-67), loading appropriate byte data associated with control messages (col. 42-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement inserting values used in destination port field and protocol field originating from the path state setup message, responder disables port after replies to probe packet/ping/query as taught by Zang with the teachings of Munshi for the purpose of further managing the communication of communicating data packets, and as to further monitor latency in an IP communication environment.

Regarding claim 3 an 9, although Munshi is silent on inserting a value in the TTL field of the IP header, Zang further discloses loading values used in destination port field and protocol field originating from the path state setup message, as well as, the TTL field of the IP header, and the layer 3 device decrements loaded values associated with the TTL fields are (Fig. 1A, col. 14, line 16-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement inserting a value in the TTL field of the IP header, and loading values used in destination port field and protocol field originating from the path state setup message, as well as, the TTL field of the IP header, and the layer 3 device decrements loaded values associated with the TTL fields as taught by Zang with the teachings of Munshi for the purpose of further managing the communication of communicating data packets, and as to further monitor latency in an IP communication environment.

Regarding claim 4 and 10, although Munshi is silent on probe fully complying with trace-route protocol except the source address in the IP header is replaced by the IP address of the network manager, Zang discloses complying with route protocol associated with version 4/traceroute, except the network manager is interested in determining latency, and the queries and request originate from manager (source) (Fig. 1A, 4 and 5, col. 11, line 58 thru col. 12, line 59, col. 13), so the SA field of the header includes the manager IP address.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement probe fully complying with trace-route protocol except the source address in the IP header is replaced by the IP address of the network manager as suggested by Zang with the teachings of Munshi for the purpose of further managing communication among IP devices in a switching environment.

Regarding claim 6 and 12, Munshi further discloses client-to-server (source-to-destination) queries/pings are routed as well as server-to-client queries/pings (col. 13, line 10-20, line 34-43).

Regarding claim 13, Munshi further discloses that the master detects failure locations in the absence of a ping/probe (request/reply) (Fig. 4A & 4B, col. 7, line 4-67).

Claim 7 and 11 contains the same limitations as claim 1, but in the form of a computer program product. Therefore, claim 7 and 11 are rejected for the same reasons that claim 1 is rejected.

Regarding 14 and 18, as indicated above, combined Munshi and Zang discloses communicating in a IP environment wherein transmission path is determined with respect to utilizing queries/probes/pings for testing the system as to increase security and minimize latency. Munshi further discloses that the master detects failure locations in the absence of a ping/probe (request/reply) (Fig. 4A & 4B, col. 7, line 4-67).

Claim 14 and 18 include the same limitations as claims 1 and 5, but in the form of a computer system, with exception of the added failure limitations, which has been addressed. Therefore, claims 14 and 18 are rejected for the same reasons that claims 1 and 5 are rejected.

Regarding claim 15, although Munshi is silent on inserting a value in each probe datagram to initiate a IP device to reply to manager station/routers, Zang further discloses loading values used in destination port field and protocol field originating from the path state setup message, responder disables port after replies to probe packet/ping/query (col. 7, line 49-67), loading appropriate byte data associated with control messages (col. 42-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement inserting values used in destination port field and protocol field originating from the path state setup message, responder disables port after replies to probe packet/ping/query as taught by Zang with the teachings of Munshi for the purpose of further managing the communication of communicating data packets, and as to further monitor latency in an IP communication environment.

Regarding claim 16, although Munshi is silent on inserting a value in the TTL field of the IP header, Zang further discloses loading values used in destination port field and protocol field originating from the path state setup message, as well as, the TTL field of the IP header, and

the layer 3 device decrements loaded values associated with the TTL fields are (Fig. 1A, col. 14, line 16-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement inserting a value in the TTL field of the IP header, and loading values used in destination port field and protocol field originating from the path state setup message, as well as, the TTL field of the IP header, and the layer 3 device decrements loaded values associated with the TTL fields as taught by Zang with the teachings of Munshi for the purpose of further managing the communication of communicating data packets, and as to further monitor latency in an IP communication environment.

Regarding claim 17, although Munshi is silent on probe fully complying with trace-route protocol except the source address in the IP header is replaced by the IP address of the network manager, Zang discloses complying with route protocol associated with version 4/traceroute, except the network manager is interested in determining latency, and the queries and request originate from manager (source) (Fig. 1A, 4 and 5, col. 11, line 58 thru col. 12, line 59, col. 13), so the SA field of the header includes the manager IP address.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement probe fully complying with trace-route protocol except the source address in the IP header is replaced by the IP address of the network manager as suggested by Zang with the teachings of Munshi for the purpose of further managing communication among IP devices in a switching environment.

Regarding claim 19, although Munshi is silent on probe fully complying with trace-route protocol except the source address in the IP header is replaced by the IP address of the

network manager, Zang discloses complying with route protocol associated with version 4/traceroute, except the network manager is interested in determining latency, and the queries and request originate from manager (source) (Fig. 1A, 4 and 5, col. 11, line 58 thru col. 12, line 59, col. 13), so the SA field of the header includes the manager IP address.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement probe fully complying with trace-route protocol except the source address in the IP header is replaced by the IP address of the network manager as suggested by Zang with the teachings of Munshi for the purpose of further managing communication among IP devices in a switching environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

August 2, 2007

WING CHAN
SUPERVISORY PATENT EXAMINER